CURRENT NOTES ON ANTHROPOLOGY.

THE QUESTION OF THE TOLTECS.

In a recent note (Science, July 24) I referred to Dr. Valentini's opinion that the ancient Toltecs belonged to the Mayan stock. This view is advocated also by Mr. E. P. Dieseldorf in an article entitled "Who Were the Toltecs?" in the Bastian-Festschrift, and by Dr. Förstemann in Globus, Vol. 70, No. 3.

The theory of the latter is that at a remote period the Mayan stock occupied North America to about N. Lat. 23°, and extended perhaps to the island of Cuba. They had developed a moderate degree of culture when the Aztecan tribes invaded their domain from the north and west. Tula and Cholula were Mayan settlements, and when they succumbed to Aztecan inroads they dowered their conquerors with a part of their superior culture, notably their mythology. In later times the Mayans were driven southward, the only fragment who managed to remain being the Huastecas of the Rio Panuco. This hypothesis, it is claimed, explains the marvelous legends of the Toltec empire, and also the similarities of culture between the two stocks. Mr. Dieseldorf is so convinced of this that he is sure if we drove a tunnel through the pyramid of Cholula we should reach the primitive Mayan temple which is buried beneath it.

CLASSIFICATION OF PRIMITIVE IMPLEMENTS.

General culture development is measured by progress in the arts, and for that reason archæologists devote such close attention to the historic development of these. Prehistoric archæology is divided into periods marked by the introduction or discovery of improved methods and materials. Mr. Joseph D. McGuire in the *American Anthropologist* for July proposes a scheme, in some respects novel, for the classification and development of primitive implements. It is five-fold in scope, considering the natural material, the most obvious use to which it would be put, the primitive tool which this would suggest, and then the special and complex tools which would result.

The scheme thus presented is ingenious, well stated and, from our view point, satisfactory. If natural man did not follow it he must have been a fool. Unfortunately, it is almost sure that he was a fool, and that he repeatedly overlooked the most obvious improvements to his condition which were directly under his nose. Perhaps some later dwellers upon earth do the same. Indeed, the tendency is so radical in the race that it is safer to take the facts alone for our guides, and to hold, at least at present, that if there are no polished stones in palæolithic sites early men were stupid enough not to 'catch on' to polishing.

THE RUINS OF COPAN.

It is generally known that for several years past the Peabody Museum of Harvard has been prosecuting excavations in the extensive ruins at Copan, Honduras. A preliminary report has just been published by the Museum which gives an outline of the work accomplished, and that in view. It is a handsome, large quarto, with numerous illustrations, a map and plans. Further special reports will follow on particular localities.

No one can examine the fifty pages of this publication without being profoundly impressed with the size, bold planning and artistic finishing, which these ancient and unknown architects gave to their constructions. The ornamentation was recklessly profuse, and the cubic mass of materials moved something surprising. The art motives at times are much beyond what we are accustomed to see in native American work, as, for example, the head of the 'singing girl' represented on plate IX.

This publication should stimulate friends of American archæology to contribute liberally to this enterprise, as it abundantly shows that the soil of our own continent offers problems in reference to ancient civilization every whit as interesting as those existing in the valley of the Nile or on the banks of the Euphrates.

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CURRENT NOTES ON PHYSIOGRAPHY.

GULF STREAM AND LABRADOR CURRENT.

PROF. WM. LIBBEY, JR., of Princeton, presented to the Sixth (London) International Geographical Congress, an abstract of the results obtained from serial temperature soundings along the boundary of the Gulf Stream and the Labrador current, made under his direction by the U. S. Fish Commission southward from the New England coast (Lat. 41° to 39°) between Block Island and Nantucket, in the summer months of 1889 to 1892. Surface and deep currents are separately discussed. The former are found to fluctuate with weather changes; the most intimate relation appearing between surface winds and the surface termination of isothermal lines (isothermobaths) on vertical north-south sections. The surface currents are continually swayed laterally, or hurried or retarded by the winds. Smaller and slower shifts of the deeper currents are found; while these effects are not yet definitely correlated with their causes, it is believed that they may be the cumulative results of varying surface impulses. Twenty-one sections are appended, shaded in red and blue to represent differences of temperature. Unfortunately they are without sufficient indication of place, depth or date.

PREGLACIAL EROSION CYCLES IN ILLINOIS.

O. H. HERSHEY discusses the physiographic development of northwestern Illinois on the basis of personal observations, comparing his results with those found by others elsewhere (Amer. Geol., Aug. 1896). He regards the general upland as a peneplain of Tertiary erosion. It is surmounted by low monadnocks, locally known as 'mounds,' 200 feet or more in local relief; the accordant summits of these eminences are tentatively taken to indicate an almost destroyed ancient peneplain, probably to be correlated with the peneplain of Cretaceous erosion elsewhere recognized. The uplands are interrupted by broad-floored valleys, and these in turn are trenched by narrow valleys, of late Tertiary and of Quaternary date respectively. The narrow valleys are more or less clogged with drift, concerning which several details are given. The drainage lines are interpreted as having been modified from ancient consequent courses by continually advancing adjustment to weak structures in successive early cycles; except that the Mississippi between Iowa and Illinois is thought to have first come into existence after the excavation of the broad-floored valleys in late Tertiary time. Taking 5 as the time needed for cutting the trenched valleys, 25 is given for the broad-floored valleys, 200 for the uplands, and more than 500 for the doubtful ancient peneplain of the monadnock tops; but all this is admittedly very rough. This essay is not only intrinsically valuable for its contents, but interesting as one of the few products of individual work in physiographic exploration; standing in this respect on the same plane with Taylor's studies of the ancient shore lines of our Great Lakes.

THE PIEDMONT PLATEAU OF VIRGINIA.

THE eighth annual field meeting of the National Geographic Society at Monticello, Va., was the occasion of an address by McGee, on the Geographic History of the Piedmont Plateau (Nat. Geogr. Mag., Aug., 1896). The undulant and mountain-embossed plateau is described as the pene-